

Broad Capabilities

J.F. Taylor, Inc. uses a wide variety of computational systems, operating systems, and programming languages to provide our customers the best device possible. We have developed real-time capabilities utilizing Intel-based systems. Our latest systems are designed using PC technology with LINUX and Microsoft Windows operating systems.

We have developed devices to provide interoperable training with other training systems using High Level Architecture (HLA) and Distributed Interactive Simulation (DIS). We have also integrated different Semi-Automated Forces (SAF) systems into our training devices. This provides a much richer synthetic environment for the warfighter.

J.F. Taylor, Inc. has fabrication facilities for both mechanical and electrical designs. This lowers cost and risk as our technicians have direct access to the engineering team throughout the fabrication and installation process.

We understand the importance of logistics and maintenance documentation as it pertains to the life cycle cost and availability of the device. Our talented logistics and documentation teams work with the engineering teams to produce accurate and complete documents the first time.



A model of the AH-1W trainer delivered overseas under an FMS Program. The trainers had 99% availability during their first five years of operation, a tribute to J.F. Taylor's quality products.

Competitive Pricing

To reduce initial costs as well as maintenance expenses for our customers, we:

- Utilize the best COTS products available to lower initial and maintenance costs.
- Rehost existing software models to reduce development time and initial costs.
- Draw from our large library of tested avionics models that can be used in new devices.
- Actively track progress throughout the design process.
- Create designs that include all human engineering factors.

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KC-130T APT developed and manufactured at the J.F. Taylor, Inc. facility from a salvaged cockpit shell.



J.F. Taylor, Inc.

Training & Simulation

Certified to ISO 9001:2008 with Design

Founded in 1983, J.F. Taylor, Inc.'s roots are in the RDT&E of military aircraft systems. This background provides us with relevant aircraft experience that we apply directly to the trainer systems we are developing today. We have been building simulation and trainer systems since 1987, and in the last five years have produced complex trainers and trainer components for the USN and USCG.

J.F. Taylor, Inc. is a TSC II prime contractor for the USN. With our experienced engineers and manufacturing facility we specialize in:

Trainer Experience

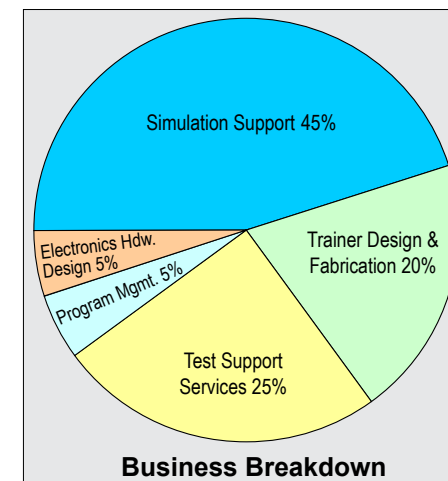
AH-1W & UH-1N
CH-47
CH-53E
F-14A/B
F/A-18C/D/E/F
KC-130T
MH-60S/R/T
SH-60B
P-3C
VH-3D & VH-60N
V-22

Full Flight Simulators & Components

High Fidelity Cockpits & Crewstations
Avionics Model Development
Trainer Device Integration, Rehosts, & Upgrades
Panel Design, Fabrication, & COTS Panels
Visual Systems & Database Development
Instructor/Operator Stations

Military Systems RDT&E

Instrumentation Development
Test Set Development
Test Planning
Data Analysis
Avionics Stimulation



Full Flight Simulators & Training Devices

J.F. Taylor, Inc. provides full-scale development of advanced military full flight simulators. Our staff of seasoned engineers considers the life cycle cost of each device and utilizes open architectures and the latest Commercial-Off-The-Shelf (COTS) components to deliver a cost-effective and capable training device. Our success on past projects, coupled with our manufacturing capabilities and experience as a master integrator make J.F. Taylor, Inc. a low-risk provider of training system devices.



MH-60S TOFT #6

Our goals are to be responsive to customer requirements, improve the warfighters' training capabilities, and lower training costs. Our teamwork, quality processes, and detailed planning provide our customers with a fully functional simulator on budget and on time. Our management believes in the Integrated Program Team (IPT) concept, and we have led and participated in IPTs on all our training device developments. This format gives the customer more frequent input into the overall design.

Extensive Experience

The company's extensive experience in military aircraft RDT&E positions J.F. Taylor, Inc. as a uniquely qualified supplier of training system devices. Our talented team of managers, engineers, technicians, logisticians, and technical writers apply knowledge acquired from both previous training systems and our RDT&E work to new training systems under development.

We have been involved in trainer development on the U.S. Navy, U.S. Marine Corps, U.S. Army, and U.S. Coast Guard platforms shown in the box above, including FMS programs.

We integrate a multitude of vendors' products into key trainer functions to produce a superior product. This includes visual system vendors such as E&S, SGI, SEOS, Quantum 3D, and Aechelon; as well as control loading system vendors such as SCT, Fokker, and Servos and Simulation.

High Fidelity Cockpits & Crewstations

J.F. Taylor, Inc. provides fully populated aircraft or helicopter cockpits for use within aircrew trainers. Our simulation cockpits provide the highest fidelity representation of the design basis aircraft to support realistic aircrew training.

Each trainer cockpit is mechanically designed and analyzed within a 3D CAD environment prior to fabrication and assembly. CAD analysis ensures that all human interfaces and control interfaces operate properly and provide the correct representation of the simulated airframe, and that structural integrity exists over the entire range of operation for the training device.

Electrical Design and Integration

Our engineering staff provides complete cockpit system designs, producing simulation cockpits that are fully wired and ready for integration with host computational systems.

- Cockpits can include fully integrated power systems to support the various simulation panels, gauges, displays, and avionics integrated within the cockpit.
- Cockpits are provided with or without fully integrated I/O systems, video distribution, and aircraft original equipment such as mission computers, displays, etc.
- We also design, develop, and integrate the simulation panels and display systems required in a given cockpit.

Crew Interfaces

Major crew interface controls, such as throttle assemblies, control yokes, sticks, and rudder pedals, are typically implemented using original aircraft components. These are integrated into an active control loading system that accurately mimics the feel of the representative aircraft. This produces a simulation cockpit that accurately recreates all the forces, cues, and displacements that aircrew would experience in the actual aircraft over the entire flight regime.

Visual Systems

J.F. Taylor Inc.'s Visual Engineering Team provides the military with diverse technical support for flight simulators. The Team integrated new visual systems for the CH-53E WST in New River and Miramar which included a six-OTW-channel and two-FLIR-channel Aechelon pC-Nova™ (v. 3.1) IG and five new VDC Marquee 9520EX projectors.

Our Team supported the Visual System integration for the MH-60S TOFT #2, delivered to NAS North Island. This system includes a SEOS Panorama collimated display system with a field of view of 200° by 60°. The image generator is Aechelon's pC-Nova™ (v.2.0), contains five OTW channels, and has an additional channel dedicated to night vision goggle (NVG) stimulation.

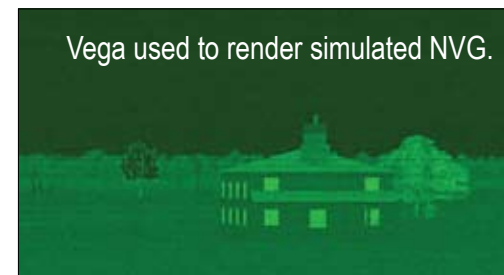
Our Visual Team also created five large databases for the executive Helicopter program, developed to run on the ESIG-5530. These databases include gaming areas in Washington D.C., New York City, Chicago, Southern California, and an ocean region with 3D sea states. The databases are NVG compatible and have been enthusiastically accepted by HMX-1 pilots for their quality and fidelity.

The Taylor Team delivered an OTW/FLIR Database to the USN Test Pilot School at Patuxent River, MD, developed using Terrex's terra Vista. Multigen Paradigm's Texture Material Mapper was used to develop the FLIR Sensor portions of the database, which represents the Southern Maryland area, including the Naval Air Warfare Center at Patuxent River.

Washington D.C. scene at night.



KC-130T APT overhead instrument panel.



Vega used to render simulated NVG.

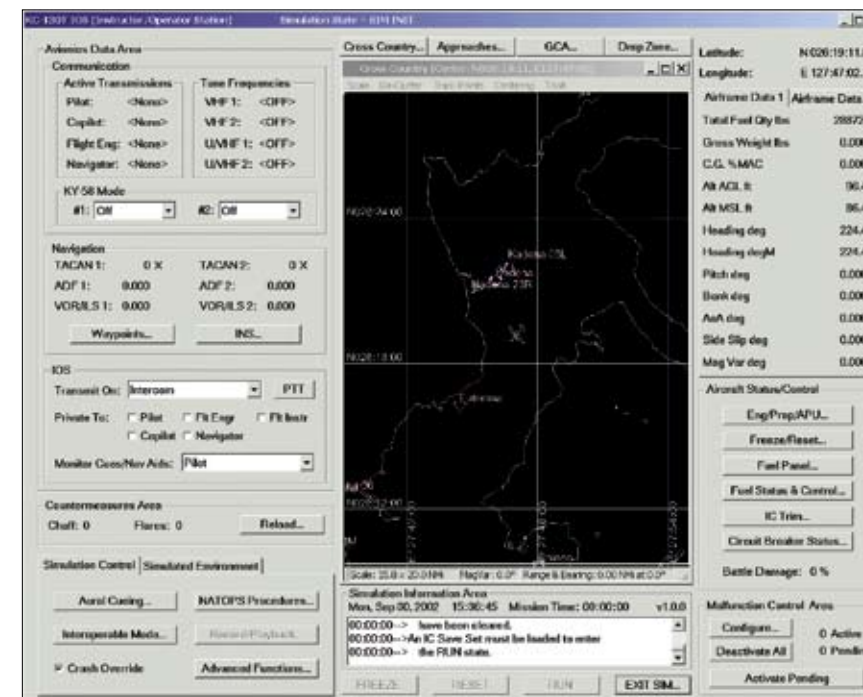
Instructor Operator Stations

J.F. Taylor's twelve-year experience with flight simulator Instructor Operator Stations (IOSs) ranges from compact single-monitor, single-operator IOSs to large, multiple-monitor, multiple-operator IOSs.

Each IOS is developed to meet a customer's specific requirements, including mechanical layout and configuration, electrical components, and IOS software capabilities. We have developed a powerful, yet easy-to-use, IOS software package (for MS Windows) that can be easily modified to support almost any aircraft simulator – fixed-wing or rotary-wing.

Standard IOS Software Capabilities

- Situation Awareness Displays
 - Cross Country Display—Coastlines, Navigation Stations, Airports, Threats, Friendlies, Waypoints
 - Moving Map Display—NIMA CDRG Data
 - Approach Plate and GCA/CCA Displays
- Remote Control Unit (remote access to IOS functions)
- Real-time Data Recording and Plotting
- Unlimited Initial Condition Save Sets
- Advanced Malfunction Controls
- NATOPS Procedure Display
- Visual Weather and Lighting Controls
- Stand-alone Instructor Training Mode with Host Emulator



Visit the J.F. Taylor, Inc. website for additional information on our capabilities and products:

www.jfti.com



Fuel management panel, back; front is shown below left.

High Fidelity Panel Design & Fabrication

J.F. Taylor, Inc. has produced high fidelity simulation panels for numerous training devices including the AH-1W, CH-47E, CH-53E, F-18C/D, KC-130T, MH-60S/R/T, SH-60B, SH-70B, VH-3D, and VH-60N. Our high fidelity panels provide our customers with:

- Accurate tactile feel of controls and indicators.
- Overall appearance that replicates aircraft panel.
- Backlighting same as aircraft.
- NVG compatibility, as required.

In addition to building simulated aircraft panels for use in our own training devices, we build panel sets and COTS panels for trainers being developed by other companies.



Interfaces

I/O interfaces can be supported to meet customers' specific needs. Interface support includes: Simple Discretes such as Digital Input, Digital Output, Analog Input, or Analog Output; RS-422 Serial I/O; and Custom I/O Designs.